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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
09 701,011	11 22 2000	Hiroshi Ando	001550	4791

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EXAMINER

ZIMMER, MARC S

ART UNIT PAPER NUMBER

1712

DATE MAILED: 04 01 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701.011

Applicant(s)

ANDO ET AL

Examiner

Marc S. Zimmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-10 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4, 5</u> | 6) <input type="checkbox"/> Other: |

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The wording of claim 7 is peculiar in that the invention is directed to a composition but, at the same time, incorporates the process language, "which hardens when a base resin composition..." and "is mixed with the curing agent composition...". As the claim is presently written, it appears that a two pack composition is not being claimed. Instead, the claim seems to be directed towards a one-part composition comprising all of the essential ingredients of (A) and (B). It is suggested that claim 7 could be replaced with the following:

7. A two-pack type curable composition comprising as the first part a base resin composition (A) which comprises (d) a curable organic polymer having in its molecule a functional group that is crosslinkable in the presence of a bivalent tin catalyst, (f) an epoxy group-containing silane compound, and (g) an epoxy compound; the second part being a curing agent composition (B) comprising (a) a hydrolyzable silyl group-containing compound, (b) a non-phthalic acid ester-based plasticizer, and (c) a bivalent tin curing catalyst.

In any event, the Applicants are required to amend claim 7 such that the aforementioned ambiguities are eliminated.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States

It should be noted for the record that the Applicants do not in any way limit the structure of component (a) representative of a silyl group-functionalized compound in claim 1. Accordingly, the Examiner searched for those documents that contained mention of *any* compound bearing a silane substituent in combination with the particularly recited plasticizer and catalyst. The art is replete with teachings of compositions that satisfy the most basic aspects of the instant invention though only a few of the more adherent examples will be described herein.

Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirose et al., U.S. Patent # 4,965,311. Hirose discloses a primer composition that, unlike the analogous compositions of the prior art, permits an alkyd top coat to dry more quickly due to the replacement of low molecular weight plasticizers with polymeric plasticizers, said composition comprising a hydrolyzable silyl group-derivatized polyether, a polymeric plasticizer, and a second aerobically curable compound that is chemically distinct from the polyether. In a preferred embodiment of their invention, the polyether will contain between 1.5 and 4 silane substituents and have a weight-average molecular weight ranging between 3,000 and 30,000 (column 4, lines 1-11). The plasticizer is selected from those outlined in column 5, lines 41-56 among which include

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polyesters, polyethers, polystyrene, and polychloroprene. Ancillary plasticizers that are non-polymeric in nature such as triaryldiethane and chlorinated paraffin may be added in concert with the polymeric congeners. As for the other curable compound, Hirose particularly mentions several drying oils, alkyd resins and diene polymers. (While the instant invention does not contemplate these materials, the composition of claim 1 may contain other components given the use of the transitional word "comprises".) As for the silane condensation catalyst, Hirose advocates the utilization of a number of conventional reagents including tin octylate.

Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yukimoto et al., U.S. Patent # 5,063,270. Yukimoto et al. disclose an invention quite similar to that of Hirose both in constitution and in purpose. That is, they describe a composition containing a silane-functionalized polyoxyalkylene, and a polymeric plasticizer. However, whereas the latter features an organic compound that cures by exposure to oxygen as a third component, Yukimoto provides for the incorporation of an organosilicon compound having a single hydrolyzable group. The role of this material is to lower the modulus of the composition as the introduction of a polymeric plasticizer results in an increase of the modulus of the cured polyether to an acceptable level. The plasticizers (column 5, lines 32-46) and catalysts (column 9, lines 58-60) are equivalent to those volunteered by Hirose.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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Claims 1 and 4-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Kalinowski et al., U.S. Patent # 6,130,306. Kalinowski discloses yet another curable composition featuring as its base material a silane-functionalized polyether, and contained therein a divalent tin condensation catalyst (column 4, lines 5-9), and a plasticizer (column 4, lines 35-42). It is further contemplated that the compound bis(3-triethoxysilylpropyl)tetrasulfane can be added to improve the tensile strength and elongation of the cured product though the mechanism by which it performs this function is not delineated. Regarding the plasticizer, Kalinowski teaches that phthalate-based compounds are suitable. Nonetheless other materials may be employed in lieu of this compound hence the reference anticipates the above claims.

Allowable Subject Matter

Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7-10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action. The prior art does not teach a composition that simultaneously incorporates all of the components of the base resin composition and the "curing agent" composition let alone their use as a two-part mixture. Homma et al., U.S. Patent # 5,336,703 discloses a two-part composition that mirrors the instant invention in several respects but does not contemplate the incorporation of an epoxy-functional silane. Furthermore, the chemical identity of the suitable plasticizers is not revealed. Isayama et al., U.S. Patent #

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4,657,986 may, in one embodiment, contain all of the essential compounds recited in claim 7 but there is no suggestion that the materials should be formulated as a two-part composition.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 703-605-1176. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Marc S. Zimmer
AU 1712

March 19, 2002

A handwritten signature in black ink, appearing to read "Robert A. Dawson". The signature is fluid and cursive, with a large initial "R" and a stylized "D".